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March 5, 1992

Ms. Cheryl Smith
U.S. EPA Region IV
Superfund Branch
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Re: Work Assignment No. C04054 - Olin Corporation, McIntosh Plant - Technical Review
Comments: Hazardous Substance Indicator Parameter Technical Memorandum
Document Control No. C04054-OC-LC-009


Dear Ms. Smith:

Dynamac Corporation is pleased to present you with PRC's Technical Review Comments on the December 1991 Hazardous Substance Indicator Parameter Technical Memorandum submitted to EPA by Olin Corporation.

If you have any questions or comments, do not hesitate to contact Gilda Knowles or me at (404) 681-0933.

Sincerely,

DYNAMAC CORPORATION



David L. Rusher
Regional Manager

DLR/vj

Enclosures

cc: Ken Meyer, EPA Regional IV Project Officer (w/o encl.)
Steve Kale, Dynamac TES Program Manager
Gilda Knowles, Dynamac Work Assignment Manager
TES WA File

TECHNICAL REVIEW COMMENTS
HAZARDOUS SUBSTANCE INDICATOR PARAMETER
TECHNICAL MEMORANDUM
OLIN CORPORATION/MCINTOSH PLANT
MCINTOSH, ALABAMA
MARCH 4, 1992

The U.S. Environmental Protection Agency (EPA) asked PRC Environmental Management, Inc. to conduct a technical review of the Hazardous Substance Indicator Parameter Technical Memorandum prepared by Woodward-Clyde Consultants (WCC) for Olin Corporation, December 1991. The overall objective for WCC's study was to develop a preliminary list of potential chemicals of concern. This was achieved by reviewing available sediment, surface water, and ground water data. The final preliminary list of potential chemicals of concern, presented by WCC, was defined for toxicity screens as the chemicals that showed a contribution to the total carcinogenic or noncarcinogenic of greater than 1 percent hazard.

Based on the information reviewed, PRC has determined that the Hazardous Substance Indicator Parameter Technical Memorandum was prepared in conformance with EPA guidance. However, technical deficiencies were found in specific sections of the report prepared by WCC. These deficiencies are presented in the following general and specific comments.

General Comments

1. Exposure assessment resulting from inhalation of ground water is not being considered. Although this does not affect the list of potential chemicals of concern, this inhalation exposure for ground water and surface water should be included for risk assessment purposes.
2. Arsenic was eliminated in some media because of low concentrations. According to Risk Assessment Guidance for Superfund (RAGS, 1989), arsenic is a known human carcinogen (weight of evidence classification A). Therefore, it should be considered a potential chemical of concern.
3. The document should clearly state that since the data have not been validated, there may be changes in the list of potential chemicals of concern.
4. The document should also state that, if later phases of work present new or different data, new constituents may be added to the list of potential chemicals of concern.
5. Specific comments 18 and 19 indicate additions and corrections that should be made to the maximum concentration values listed in Tables 1 and 2. Note that these changes will affect the Hazard Factor calculations as well as the Hazard Descriptor for those affected compounds. These should be recalculated appropriately.
6. There should be footnotes defining the sample codes on all of the appendices. All appendices should also have individual page numbers.
7. WCC apparently applied the human health guidance (RAGS, Vol. I), in developing the preliminary list of chemicals of concern. However, the list should be reevaluated by using the ecological guidance (RAGS, Vol. II), in addition to the human health guidance (RAGS, Vol. I).

Specific Comments

1. Executive Summary, page ES-2, paragraph 1, last sentence
The word "form" should be changed to "from."
2. Section 1.0, page 1, paragraph 2
This paragraph describes the site vicinity. It is stated that the west side of the site is bounded by "land." The contractor believes that this is land used by Olin and, possibly, owned by Olin. A more detailed description of the land is needed.
3. Section 1.0, page 2, paragraph 2
It is stated that chloroform is "probably a degradation product from the operation of the Crop Protection Chemicals (CPC) plant from 1954 to 1982." The degradation products of all of the compounds manufactured at the CPC plant during this time [pentachloronitrobenzene (PCNB), trichloroacetonitrile (TCAN), and 5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole (terrazole)] should also be presented.
4. Section 2.1, page 5, paragraph 3
The second sentence in this paragraph is unclear. It states that the purpose of the Environmental Impact Study was "to evaluate the impact of the construction of a chloro-alkali diaphragm cell process at the McIntosh plant site." Does this mean process building, process system, or process unit? Please clarify.
5. Section 2.1, page 6, paragraph 3
This paragraph indicates that the ground water flow direction was established. Please state the direction.
6. Section 2.2, page 8, paragraph 2
When describing the concentration ranges of mercury and pentachloronitrobenzene, the method detection limits used should also be stated, as was done for hexachlorobenzene.
7. Section 2.2, page 8, paragraph 3
This paragraph mentions that mercury in water was detected at or below the drinking water standards. Please state the drinking water standard value that was used for comparison, and reference the source from which this value was obtained.
8. Section 3.1, page 9, paragraph 1
The document should include a table indicating the depths of the monitoring wells sampled and from which aquifer the ground water is being drawn.
9. Section 4.0, page 12, paragraph 1
It should be made clear that not all of the criteria mentioned here need to be met, but that any one or any combination is sufficient. Also, please state which criteria will be used for this study.

10. Section 4.0, Contract Laboratory Program Analytical Results, page 12, paragraph 3

The first sentence says that "Table 1 summarizes the Target Compound List organic parameters that are interpreted to be detected based on the CLP Data." Be specific, indicate what this detection is based on and define the detection criteria, such as contract-required quantitation limit (CRQL), detection limit (DL), quantitation limit (QL), or some other determined value.

11. Section 4.0, CLP Analytical Results, page 13, paragraph 1, second sentence

This sentence states that carbon disulfide is a laboratory contaminant and therefore was considered nondetected in the sediment or surface water samples. This compound is, however, included in the surface water section of Table 1.

12. Section 4.0, CLP Analytical Results, page 13, paragraph 1, next to last sentence

It should be stated that phthalate esters including bis(2-ethylhexyl)phthalate, are qualified as nondetected in ground water. This will support the omission of diethylphthalate identified in sample PL-9D, which was presented in Table 1.

13. Section 4.0, CLP Analytical Results, page 13, paragraph 1, last sentence

Carbon disulfide was also considered for the list of potential chemicals of concern in ground water (Table 1). Please add this fact to the sentence. Beginning the sentence with a transitional phrase, such as "Although they are common laboratory contaminants,..." would make it read more clearly.

14. Section 4.0, CLP Analytical Results, page 13, paragraph 4

This paragraph indicates that total dissolved inorganics are used to determine the maximum reported values for ground water. However, both dissolved and total inorganics are used for surface water. There was no mention of sediments. Based on the tables and appendices, it appears that both dissolved and total inorganics were used to determine the maximum reported values for sediments. Please clarify.

15. Section 4.0, CLP Analytical Results, page 14, paragraph 3

Explain the rationale for the decision to eliminate compounds from the ground water medium and no other. For example, the organic list may have been unmanageable, or the other media may not have met the criteria for deletion.

Alpha-chlordane was not listed in the ground water section of Table 1. It should be added, since it was detected in sample BR-7.

16. Section 5.0, page 16, paragraph 2, first sentence

Please identify which table(s) are being referred to in this sentence.

17. Section 5.1, page 18, paragraph 2

In the next to last sentence, the word "cyanide" is repeated.

18. Table 1, Summary of Organic Compounds

The tentatively identified compounds in this table have no associated data sheets in the appendices. Also, the N qualifier with which their concentrations were flagged, is not defined in this table or any of the appendices.

Bromoform, a volatile organic compound, should be added to the surface water section of this table. It was detected in Sample WG-BD03. Also, according to Appendix A, the maximum reported concentration of carbon disulfide is 3J, not 4J.

Some corrections and additions need to be made to the pesticide/polychlorinated biphenyls section concerning the sediment samples.

Add: Endosulfan I, with a maximum concentration of 110PD $\mu\text{g/kg}$ (detected in Sample SG-C5)

Dieldrin, with a maximum concentration of 15P $\mu\text{g/kg}$ (detected in Sample SG-F7)

Endosulfan II, with a maximum concentration of 51 $\mu\text{g/kg}$

Correct: Gamma chlordane has a maximum concentration of 78, not 78P

Aldrin has a maximum concentration of 4.7P, not 5.0P

19. Table 2, Summary of Inorganic Analytes

Corrections should be made to the inorganic sediment maximum concentration values, based on information in the appendices.

Correct: Cadmium from 0.78 mg/kg to 1.0 mg/kg

Copper from 57.8 mg/kg to 50.4 mg/kg

Cyanide from 1.5 mg/kg to 0.47 mg/kg

Mercury from 290 mg/kg to 30.1 mg/kg

Silver from 1.0 mg/kg to 1.36 mg/kg

Thallium from ND4 mg/kg to 0.9 mg/kg

Zinc from 227 mg/kg to 205 mg/kg

20. Figure 3, Groundwater Sampling Well Location Map

In the legend, the designation for alluvial aquifer wells vs. Miocene aquifer wells should indicate only that the solid circle denotes alluvial and the solid triangle denotes Miocene. Delete the "PL-4S" and "DH-3"; it only adds confusion. On the figure, the prefixes PL and DH appear to represent alluvial and Miocene wells, respectively.

Also, ground water sample D/WW-12 is not on the sample location map. Please explain why it does not appear.

21. Appendix A, Preliminary Groundwater Data

According to the page numbering, there are two sections for all organic compound lists. Please explain the reason for this (such as different analytical methods were used, it represents two separate sampling episodes, or whatever the case may be).

22. Appendix B, Preliminary Surface Water Data

Sample WG-H5/01, in the total inorganic constituent table, has a superscript "1" after the ND flag. If there is a difference between the not detected "ND" and an "ND¹," please explain this designation.

Similarly, Page 1 of 3 of the Preliminary Surface Water Dissolved Inorganic Constituents has a footnote of ¹ ND = Not detected; however, there is no footnote in the body of the table.